

AMENDMENTS TO THE DRAWINGS

Figs. 1A-1D and 2A-2C were objected to under 37 CFR 1.84 because they contain text smaller than .32 cm. The drawings were also objected to under 37 CFR 1.83(a) because the drawings failed to show every feature of the invention specified in the claims.

The attached sheet(s) of drawings have been amended to include the omitted features of the application and so the drawings are in compliance with 37 CFR 1.84. No new matter has been added.

Attachment: Replacement sheets (Figs. 1A-4)
 New sheets (Figs. 5A-5F)
 Annotated sheet showing changes (Fig. 3)

REMARKS

The Office Action mailed April 17, 2007, has been carefully considered. In response thereto, the present application has been amended in a manner which is considered to place it into condition for allowance. Accordingly, reconsideration and withdrawal of the outstanding Office Action and issuance of a Notice of Allowance are respectfully solicited in view of the foregoing amendments and the following remarks.

Claims 1, 5, 6, 18, 22 and 23 were rejected under 35 U.S.C. § 102(b) as being anticipated by “Reuse Distance Analysis” by Ding and Zhong. Claims 1, 5, 6, 18, 22 and 23 have been canceled, rendering the rejection of these claims moot. The claims which depended from those claims have been rewritten in independent form.

Claims 2, 3 19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ding as applied to claims 1 and 18, and further in view of “Reuse Distance Analysis for Scientific Programs” by Zhong et al. (hereinafter *Zhong*) in view of “The Relative Error of an Approximate Algorithm” by Bowen (hereinafter *Bowen*). Claims 4, 7-9, 21 and 24-26 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ding* as applied to claims 1, 6, 18 and 23, and further in view of *Zhong*.

Applicants note that the reference to *Zhong*, published in March 2002, which is less than a year before the provisional application filing date of January 2, 2003, describes their own work. To demonstrate as much, enclosed with this Response is a Declaration under 37 CFR § 1.132 by the inventors explaining the relationship of the *Zhong* paper to the claimed subject matter in the present application and advising that co-author, Ken Kennedy, now deceased, is not an inventor of the subject matter contained in the present application. Accordingly, the Applicants respectfully submit that the *Zhong* paper is not prior art under any subsection of 35 U.S.C. § 102 and therefore respectfully request that all grounds of rejection involving that reference be withdrawn insofar as the claims are entitled to that filing date.

Claims 11, 28, 35 and 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ding as applied to claims 6 and 23, and further in view of U.S. Patent No. 5,349,656 to Kaneko et al. (hereinafter “Kaneko”). Claims 12-16 and 29-33 are rejected under 35 U.S.C. §

103(a) as being unpatentable over *Ding* and *Kaneko* as applied to claims 11 and 28, and further in view of U.S. Patent No. 6,421,668 to Yakhini et al. (hereinafter *Yakhini*).

Applicants respectfully traverse the Examiner's rejection of claims 11-26, 28-33 and 35-37, as the proposed combination of references would not have resulted in the present claimed invention.

Kaneko is based on task scheduling. The distance disclosed in the cited portion of *Kaneko* is defined thus: "Tasks having a greater amount of shared data are considered that their distance is short." Affinity groups are based on that distance. The distance in *Kaneko* is quite different from the affinity groups of the present claimed invention. The affinity in *Kaneko* was defined between different tasks based on the common data they access. Reference affinity is defined between different data based on how they are accessed by the same program (task). Accordingly, the proposed combination of references would not have had all of the claimed features.

In response to the rejection of claims 17 and 34, *Yakhini* discloses one clustering algorithm. That clustering algorithm works differently from the claimed invention, just like the other clustering schemes discussed and compared in Applicants' PLD104 paper. The average distance in the present application is taken over different accesses within a particular range (bin) and calculated before clustering. In *Yakhini*, the average distance is used to compute the aggregate affinity between one entity and entities currently in a cluster as one step of clustering. In other words, Applicants uses an average "reuse" distance while the reference refers to average "entity-to-cluster" distance.

Finally, with regards to the rejection of claims 17 and 34, the calculations in the cited portion of *Yakhini* are so different from those in the present application that the combination of references asserted in the Office Action would not have resulted in the present claimed invention.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Please charge any deficiency in fees, or credit any overpayment thereof, to our Deposit Account No. 23-2185, under Order No. 000687.0313 from which the undersigned is authorized to draw. If a petition for extension of time is required and is either not filed herewith or insufficient, the Applicants petition under 37 C.F.R. § 1.136 for such an extension for as many months as are required to render this submission timely. Any fee due is authorized above.

Dated: August 17, 2007

Respectfully submitted,

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Attachments

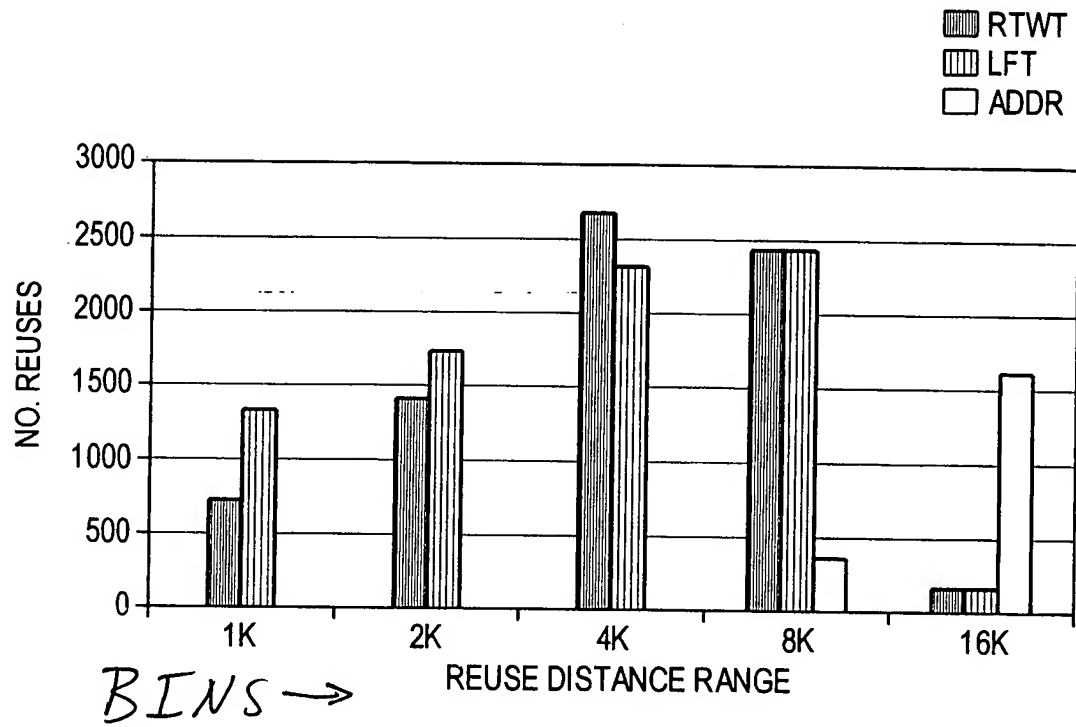


FIG. 3

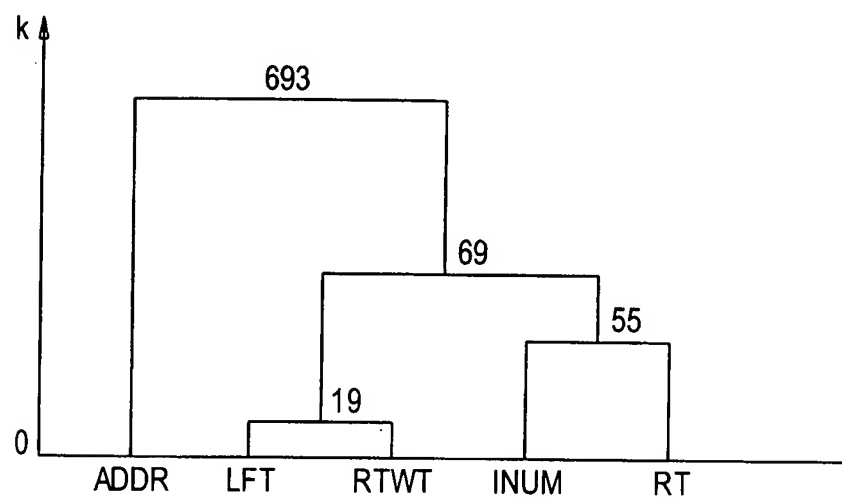


FIG. 4